

**REMARKS**

Claims 1-59 were previously pending in this application. In the current Office Action, claims 42-59 were withdrawn as a result of a Restriction Requirement. No new claims are added and no claim amendments are made in this Response. As a result, claims 1-41 are pending for examination with claim 1 the sole pending independent claim.

**Summary of Telephone Conference with Examiner**

Applicants thank Examiner Fox for his time and courtesy during the telephone interview that took place on December 9, 2005 with Robert Skrivanek. During that telephone interview, the rejection of claim 1 under 35 U.S.C. §103(a) over the combination of U.S. Patent No. 6,629,546 to Eidsmore et al. ("Eidsmore") in view of U.S. Patent No. 6,615,871 to Ohmi et al. ("Ohmi") was discussed. Mr. Skrivanek explained that in view of Eidsmore's repeated emphasis of the desire to reduce the cost and manufacturing complexity of machined modular block systems, such as that described in Ohmi, he believed Eidsmore taught away from the proposed combination. Although no agreement was reached, Examiner Fox indicated he would consider Applicants arguments in detail if made in a written response.

**Rejections Under 35 U.S.C. §103**

The Office Action rejects claims 1-15 and 18-34 under 35 U.S.C. §103(a) as allegedly being unpatentable over Eidsmore in view of Ohmi. Applicants respectfully assert that claims 1-15 and 18-34 are patentable in view of the combination of Eidsmore and Ohmi because there is no suggestion or motivation to combine Eidsmore and Ohmi, and in fact, Eidsmore teaches away from the combination proposed in the Office Action. Further, Applicants respectfully assert that Ohmi fails to teach any "equivalence," as referred to in the Office Action, that provides such a suggestion or motivation. (Office Action at page 3.)

Independent claim 1 recites "a substrate having a substrate body that includes a first substrate port and a second substrate port formed in a first surface and a first fluid passageway that ... fluidly connects the first substrate port to the second substrate port." Claim 1 further recites "a manifold having ... a fluid passageway ... wherein the substrate further includes a channel ... being adapted to position the manifold so that the first surface of the substrate body and the first surface of the manifold body are aligned in a common plane." Thus, a fluid

passageway is included in the substrate to fluidly connect the first substrate port and the second substrate port, and a channel in the substrate positions a “manifold” which also includes a fluid passageway.

Eidsmore describes the use of “bridge fittings” that “transfer fluid between adjacent fluid components.” (Col. 5, lines 23-25.) Eidsmore also describes that a “backing plate 40” (termed a “substrate” in the Office Action) may have an “interior groove ... for receiving a plurality of bridge fittings.” (Col. 6, lines 6-9.) Nowhere, however, does Eidsmore disclose, teach, or suggest the desirability of employing “a substrate having ... a first fluid passageway that extends in a first direction and fluidly connects the first substrate port to the second substrate port” as recited in claim 1, let alone a combination where such a substrate further includes a channel adapted to position a manifold as recited in claim 1.

In contrast to suggesting the desirability of the above combination, Eidsmore teaches away from the asserted combination by repeatedly describing the disadvantages resulting from an approach that employs “modular blocks” which have “internal flow passageways.” (Col. 1, lines 37-63.) For example, in the Background of the Invention, Eidsmore describes that “[o]ne disadvantage to these types of prior art modular systems is that the entire modular block is made of high purity metal. Further, these block components also have higher manufacturing costs due to the complexity of machining multiple passageways of a single block as well as a higher risk of expensive scrap being formed due to the manufacturing complexity” (emphasis added). Id. Indeed, throughout the disclosure, Eidsmore repeatedly emphasizes that his design “dramatically reduces the amount of expensive material utilized” and avoids the costs and complexities associated with prior art modular systems. (Col. 1, line 66-col. 2, line 5; see also col. 5, lines 35-54, col. 6, lines 23-28, col. 9, lines 39-43, col. 14, lines 11-15, and col. 15, lines 1-17.)

As an initial matter concerning Ohmi, Applicants note that Ohmi also fails to describe any “substrate having ... a first fluid passageway that extends in a first direction and fluidly connects the first substrate port to the second substrate port” where such a substrate further includes a channel adapted to position a manifold as recited in Applicants’ claim 1. The Office Action asserts that Ohmi teaches “equivalence” between “substrate/manifold[s] and integral block[s]” because Ohmi allegedly shows “another gas stick where the inlet side of the MFC can be either a substrate/manifold or an integral block.” (Office Action at p. 3).

The Office Action does not specifically identify where in the disclosure of Ohmi such “equivalence” is taught. Lacking any specific reference, Applicants presume that the “equivalence” to which the Office Action is referring is that described at column 11, lines 29-45 of Ohmi. If the Examiner intended to refer to some other portion of Ohmi for such “equivalence,” the Examiner is respectfully requested to point this out so that Applicants may respond accordingly.

At column 11, lines 29-45, Ohmi indicates that “the first inflow channel member 30 and the third communication channel member 38” may alternatively “each be a rectangular parallelepipedal member having a V-shaped channel,” and that “[c]onversely, the first communication channel member 31 or the like may [alternatively] comprise two joint holding members, two joints and a short tubular projection.” However, rather than teaching that they are equivalent, Ohmi describes that the rectangular parallelepipedal V-shaped channel member is preferred where heating of the process gas is desired, whereas the two joint holding member solution with the two joints and tubular projection is preferred where reduced weight (and presumably cost) is desired. Further, although Ohmi indicates that the rectangular parallelepipedal V-shaped channel member may be used in some embodiments and the joint holding members with the joints and tubular projections can be used in other embodiments, nowhere does Ohmi teach or suggest that the joint holding members with the joints and tubular projections can be included in a block that includes a V-shaped channel (i.e., a fluid passageway). Thus, Ohmi fails to teach or suggest a combination that comprises a substrate that includes a fluid passageway that fluidly connects a first substrate port and a second substrate port formed in a first surface of the substrate body where the substrate also includes a channel formed in the first surface of the substrate body adapted to position a manifold that also includes a fluid passageway.

Applicants respectfully assert that the Office Action fails to properly support a *prima facie* case of obviousness. Although Eidsmore discloses a backing plate 40 having a transverse channel 41 that can receive a bridge fitting 50, none of the backing plates 40 described in Eidsmore includes first and second substrate ports and a fluid passageway formed therein. With respect to Ohmi, none of the parallelepipedal V-shaped channel members includes a channel formed therein. In light of the clear teaching by Eidsmore to avoid such “modular manifold blocks, (with the surface mounted components thereon) made of expensive materials and which have the internal gas flowpaths integrally machine out of the manifold block,” (Eidsmore, col 5,

lines 37-41), one of ordinary skill in the art would not have substituted the intergral block of Ohmi instead of the substrate/manifold in Eidsmore for the reasons asserted in the Office Action.

Accordingly, for the above reasons Applicants respectfully request that the rejection of claim 1 under 35 U.S.C. §103(a) be reconsidered and withdrawn. In addition, Applicants respectfully assert that each of the dependent claims 2-15, and 18-34 is also allowable because each depends either directly or indirectly from claim 1 and request that the rejections of claims 2-15 and 18-34 also be reconsidered and withdrawn.

The Office Action also rejects dependent claim 37 under 35 U.S.C. §103(a) as allegedly being unpatentable over Eidsmore in view of Ohmi as applied to claim 1 and further in view of U.S. Patent No. 6,634,385 to Symington ("Symington"). Claim 37 depends from claim 1. Applicants respectfully assert that claim 37 is allowable because Symington also fails to cure the deficiencies of Eidsmore and Ohmi as applied to claim 1 and request that the rejection of claim 37 also be reconsidered and withdrawn.

#### Allowable Subject Matter


Claims 16-17, 35-36 and 38-41 are indicated as containing allowable subject matter. Applicants have deferred re-writing claims 16-17, 35-36 and 38-41 in independent form in view of the arguments provided herein regarding the patentability of the independent claim from which they depend.

**CONCLUSION**

In view of the foregoing remarks, reconsideration is respectfully requested. This application should now be in condition for allowance; a notice to this effect is respectfully requested. If the Examiner believes that the application is not in condition for allowance, the Examiner is requested to call the Applicant's attorney at the telephone number listed below.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicants hereby request any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 50/2762.

Respectfully submitted,  
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